

# FLEXX Urban Bogies

Easy access in the city



Bogies

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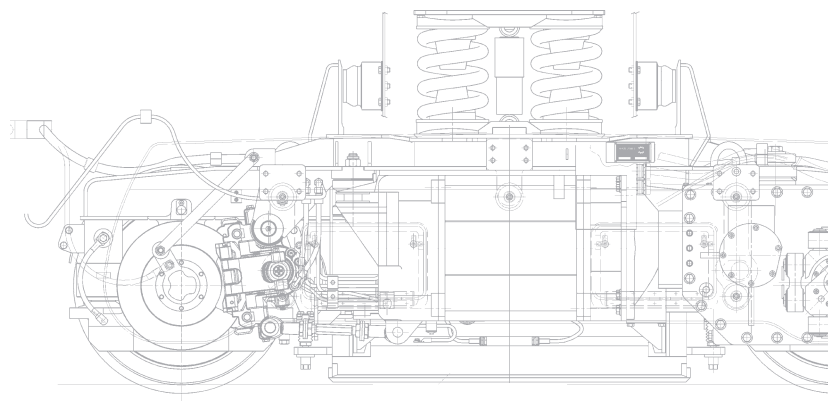
**Trams and light rail vehicles are the arteries of cities. Their frequency and reliability are of utmost importance to ensure smooth and safe circulation in the cities.**

Trams and light rail vehicles are designed for ease of accessibility and convenience for the urban traveller. *FLEXX* Urban bogies make these features possible through their compatibility with low floor levels. Particular attention is also paid to maintenance aspects such as minimum rail and wheel wear.

The *FLEXX* Urban bogies are characterized by their environmentally friendly features: they are perfectly integrated into the vehicle to minimize the emission of noise and vibrations to the environment.

*FLEXX* Urban bogies serve the complete range of tram and light rail vehicles: from 100% low floor city trams to dual-system trams and for narrow to standard gauge networks.

The portfolio offers solutions with standard axle technology as well as independent wheel technology, with coil spring, hydraulic or pneumatic suspension.





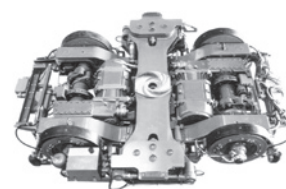
FLEXX Urban 1000



FLEXX Urban 2000



FLEXX Urban 2500



Technical Features	FLEXX Urban 1000	FLEXX Urban 2000	FLEXX Urban 2500
<b>Gauge</b>	900 / 1,000 / 1,435 mm	1,000 / 1,435 mm	1,435 mm
<b>Access</b>	100% low-floor	70% low-floor	70% low-floor
<b>Wheel base</b>	1,850 mm	1,800 mm	1,800 mm
<b>Wheel diameter</b>	570 mm	600 mm	630 - 700 mm
<b>Maximum speed</b>	70 km/h	70 km/h	100 km/h
<b>Mass (trailer)</b>	4.7 (3.3) t	4.5 (3.0) t	4.8 (3.2) t
<b>Axle load</b>	10 t	9.25 t	11 t
<b>Bogie height u. gangway</b>	310 mm	350 mm	580 mm
<b>Power</b>	2x100 kW	95-125 kW	2x 120-140 kW
<b>References</b>	Linz, Lodz, Eskisehir, Geneva, Brussels, Marseille ...	Bremen, Dessau, Dresden, Essen, Frankfurt, Halle, Kassel, Schwerin, Krakow ...	Cologne, Stockholm, Minneapolis, The Hague ...

### FLEXX Urban 1000

The *FLEXX* Urban 1000 family is designed for 100% low-floor trams. With this bolsterless bogie family the solution of a 100% low-floor vehicle has been achieved with the simplicity and robustness of standard axle technology. Ease of access to the hydraulic brake and to the drive system ensures efficient and low cost maintenance.

The design of the *FLEXX* Urban 1000 bogies are characterized by a short wheelbase for smooth negotiation of curves, whilst elastomeric primary suspension, resilient wheels and a fully suspended drive system assure minimal noise and vibrations.

Suitable for both narrow and wide carbodies, the compact design of the *FLEXX* Urban 1000 bogies is compatible with a full seating arrangement, thereby creating a high level of comfort.

More than 1,300 bogies of this type have been in service since 2001, for example in Austria, France, Belgium or Turkey.

### FLEXX Urban 2000

The *FLEXX* Urban 2000 family is designed for 70% low-floor trams and light rail vehicles. The motor bogie is equipped with standard axle technology and the trailer bogie with independent wheel technology.

These simple and robust bogies are equipped with a bolster enabling them to rotate under the car body for easy transit through narrow curves.

More than 2,000 units have been in service since 1998 with bogies operating in German and Polish cities.

### FLEXX Urban 2500

The *FLEXX* Urban 2500 family is typically used for high floor or 70% low-floor high capacity trams. This type of bogie enables 70% low-floor combined with the simplicity and robustness of standard axle technology.

The short wheelbase of the *FLEXX* Urban 2500 family allows for smooth curve negotiation resulting in minimal wheel wear. The elastomeric primary suspension, resilient wheels and a fully suspended drive system leads to reduced noise and vibration transmission.

Over 1,000 bogies of this type have been in service since 1995, for instance in Sweden, Germany, USA or The Netherlands.

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